

Equity and Resilience Briefing

October 2018

[Topics covered in this document:](#)

[Public Health and Wellbeing](#)

[Air Quality](#)

[Housing](#)

[Economy and Workforce Development](#)

Contents

Introduction	3
<hr/>	
Equity	4
<hr/>	
Introduction	4
Defining Equity.....	8
County and Metro Equity Initiatives.....	9
Topic Overviews	13
Resilience	19
<hr/>	
Introduction	19
Defining Resilience.....	19
Shocks and Stresses.....	20
Vulnerable Populations and Neighborhoods.....	22
Topic Overviews	23
Towards an Equitable and Resilient L.A. County.....	25
<hr/>	
What We Heard in Prior Workshops.....	26
Potential Indicators.....	31
Local, Regional, State, and National Laws and Policies	34
<hr/>	
Local Equity.....	34
Local Resilience.....	35
Regional Equity.....	36
Regional Resilience.....	36
State Equity.....	36
State Resilience.....	38
National Resilience.....	39



Introduction

The L.A. County Chief Sustainability Office, in partnership with BuroHappold Engineering, UCLA, Liberty Hill Foundation, Estolano LeSar Advisors, Gladstein, Neandross & Associates, and Raimi + Associates, is hosting a series of workshops to inform Our County, the countywide sustainability plan. Our County is an effort to outline a bold, inclusive vision for the future that balances the co-equal values of environment, equity, and economy.

Each of the first nine workshops discussed the issues and opportunities related to a specific topic, such as water, as well as its intersections with housing, economic and workforce development, and other cross-cutting issues. The final workshop in this series is focused on equity and resilience; as the culmination of the prior workshops, it is designed to provide a dedicated opportunity to apply the lenses of equity and resilience to the plan as a whole.

Please note that this briefing document is not a plan – it provides background information to inform the equity and resilience workshop and presents equity and resilience recommendations from prior workshops as a starting point for discussion. **This briefing includes a more detailed discussion of public health and wellbeing, air quality, housing and land use, and economy and workforce development**, as these topics are critically important to the equity and resilience discussion and have not been described in detail in the briefings distributed in previous nonprofit sector workshops. There are a wide range of equity and resilience issues related to transportation, open space, and other topics that are described in the other briefings.

(Note that the standalone briefings for energy and climate, landscapes and ecosystems, public health and wellbeing, transportation, waste and resource management, and water may be downloaded at ourcountyla.org/resources.)

Readers of previous briefings may note that this document has a slightly different organization. There is no governance section, for instance, as equity and resilience are shared responsibilities that permeate every public agency. Similarly, this briefing document does not present extensive data on existing conditions, because we measure success for equity and resilience in a different manner than we do for water or biodiversity or climate change mitigation. Instead, this briefing discusses a few ways in which various public and non-governmental organizations define and measure equity and resilience, and presents some of the ideas raised in prior workshops as a basis for discussion.

Equity and resilience are fundamental to the long-term sustainability of Los Angeles County. Ensuring equitable outcomes and increasing the adaptive capacity of communities will not only require concerted effort, but also systems change. It is a tremendous challenge, but also one that Our County can address through regional leadership and coordinated action.

Equity

Introduction

Incorporating equity considerations into public policy discussions is essential to realize a future County which provides access to opportunity and achieves positive health and wellbeing outcomes for all County residents – regardless of race, class, age, religion, gender, disability, or residency status.

Los Angeles County has a long history of discriminatory public policy which has led to housing and land use patterns where communities of color are disproportionately exposed to environmental pollution and have less access to economic opportunity and open space. One of the most egregious practices was that of “redlining.” During the Great Depression, the federal government established the Home Owners’ Loan Corporation (HOLC) in order to stabilize the housing market. The HOLC program was tasked with assessing investment risks, which in turn impacted where banks would approve home loans. In practice, the HOLC relied upon lenders that would rate neighborhoods based on their “desirability.” Low income neighborhoods and communities of color were typically the ones that were rated as least desirable by the HOLC, as can be seen in the map shown in Figure 1. The scale from least to most desirable being red (hence the name redlining) to yellow to blue to green.ⁱ

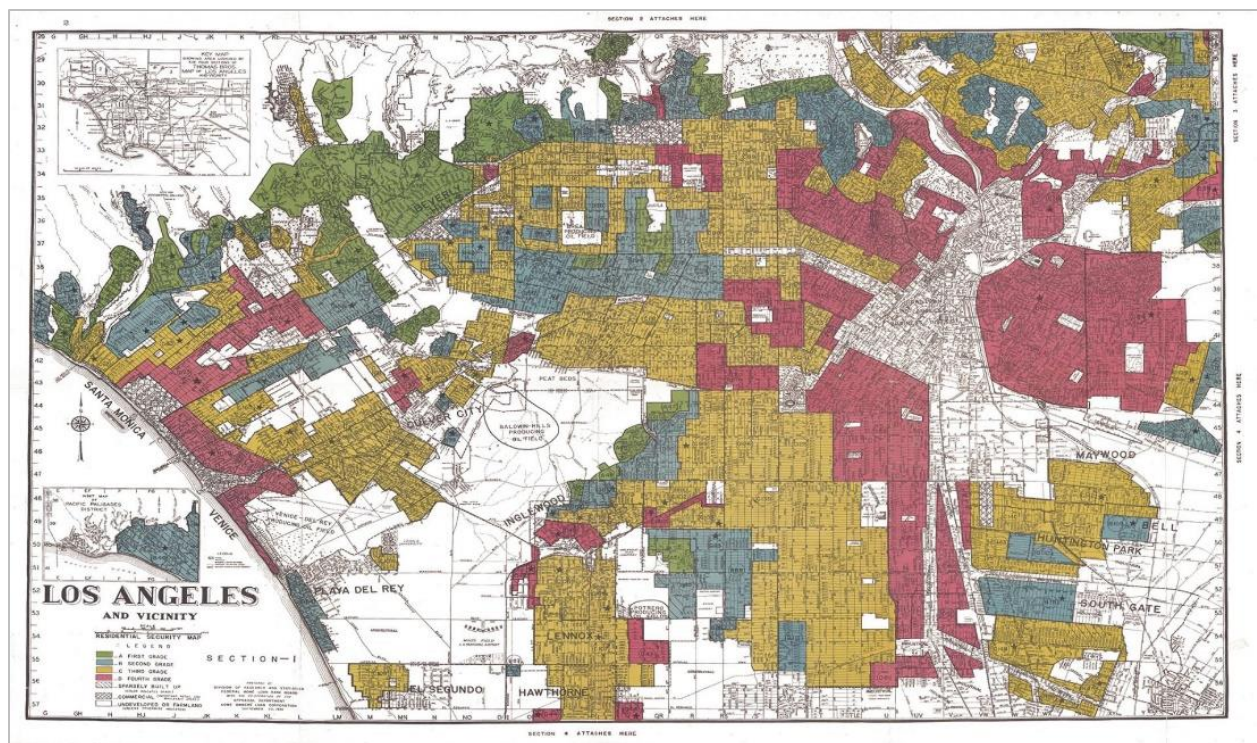


Figure 2. HOLC “Redlining” Map of Central Los Angeles (1939)ⁱⁱ



The practice of redlining made it extremely difficult for low income and minority residents to secure home loans, buy property, and accumulate wealth that could be passed on to the next generation. This was exacerbated by other discriminatory practices such as racially restrictive covenants, which prohibited homeowners in white communities from selling or renting property to people of certain races, ethnic origins, and/or religions. More recently, predatory lending practices not only contributed to a global economic downturn but also imposed economic stress on many of the same neighborhoods which had been unfairly targeted.

Unable to buy property in “desirable” neighborhoods, many low income and minority residents moved to areas of L.A. County – including unincorporated communities – that had less access to jobs, high quality schools, health care, nutritious food, parks and recreation, and other factors which increased the intergenerational wealth gap. Many of these communities face higher levels of environmental pollution that impact their economic, physical, and mental health.

Environmental Justice

Environmental justice is defined within state law to mean “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws, regulations, and policies.”ⁱⁱⁱ It is critically important in L.A. County, where the burden of environmental pollution is unequally distributed. Air pollution, proximity to industrial pollutants, and water and soil pollution are examples of the types of hazards that impact health that environmental justice communities tend to bear. It is also important to note that race is a more powerful predictor of pollution exposure than social class; racial minorities are more likely to be exposed to environmental pollution than whites of the same social class.^{iv} Los Angeles County is also characterized by a particularly high level of residential segregation by race and ethnicity.^v

Recently, the Department of Regional Planning has been working with the USC Program for Environmental and Regional Equity and Occidental College to develop a countywide Environmental Justice Screening Methodology map (EJSM). EJSM is a GIS-based analysis and mapping tool that allows for comparisons of the cumulative pollution impacts and community vulnerability across the County. It analyzes various data and indicators from the following categories to generate scores at the Census tract level:

- Proximity to Hazards and Sensitive Land Uses
- Health Risk and Exposure
- Social and Health Vulnerability
- Climate Change Vulnerability
- Drinking Water Quality and Vulnerability

EJSM incorporates land use information to analyze sensitive populations and non-occupational exposure. The methodology also integrates place-based measures of environmental hazard, exposure, and risk with metrics of individual and community vulnerability. The score for each category reflects a quintile distribution and the composite scores for each Census Tract, which is a sum of scores from all categories, illustrating the degree of disproportionate, cumulative potential risks borne by residents. The draft EJSM is shown below as Figure 3.

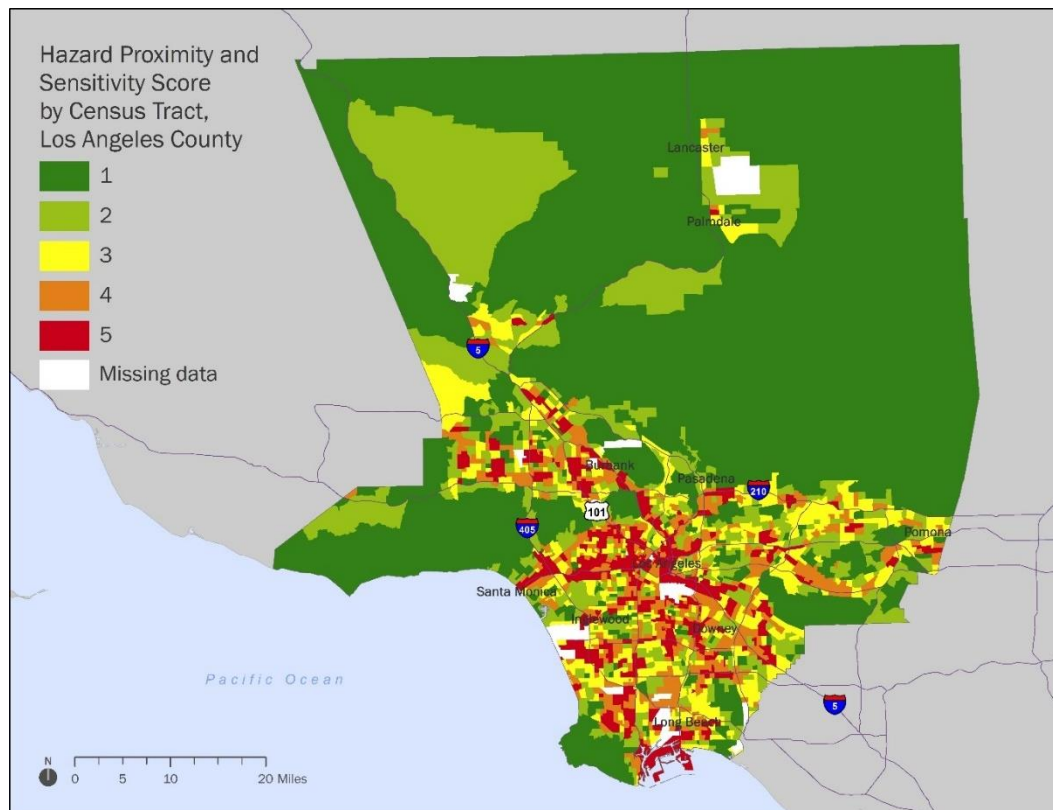


Figure 4. Preliminary Environmental Justice Screening Methodology Map (EJSM)¹

EJSM will provide flexible, customizable programming to serve County needs, such as prioritizing vulnerable communities within Los Angeles County. The final map will be deployed on a public-facing platform in the near future. The tool will be used to help inform the County’s environmental justice policies and other relevant efforts.

In addition to EJSM, there have been similar efforts by public agencies to identify environmental justice communities. CalEnviroScreen (CES) is a statewide screening methodology used to help identify California communities that are disproportionately burdened by multiple sources of pollution and are sensitive to the effects of pollution. The U.S. Environmental Protection Agency also has an EJSCREEN mapping and screening tool. While the methodologies differ between the tools, they represent related efforts to quantify the cumulative impacts of pollution, taking socioeconomic factors into account.

¹ The EJSM is still in development as of October 2018; the final map may very slightly from the preliminary map shown here.



It is important to note that there is no single factor burdening the region. Rather, several environmental, health, and socioeconomic indicators—including ozone, hazardous waste, cardiovascular disease rate, unemployment and housing burden—make environmental justice communities a priority for future planning, as identified by State Senate Bills 535, 1000, and 379 and Assembly Bill 617.

Defining Equity

While various definitions of equity have been used by public agencies and nongovernmental organizations, most are organized around a set of lenses that guide the development of public policy that address the needs of the most disadvantaged communities and individuals. For the purposes of this briefing document, the Urban Sustainability Directors Network (USDN) Equity Scan Steering Committee definition is presented below:

Equity in sustainability incorporates procedures, the distribution of benefits and burdens, structural accountability, and generational impact. This includes:

- **Procedural Equity** – inclusive, accessible, authentic engagement and representation in processes to develop or implement sustainability programs and policies
- **Distributional Equity** – sustainability programs and policies result in fair distribution of benefits and burdens across all segments of a community, prioritizing those with highest need
- **Structural Equity** – sustainability decision-makers institutionalize accountability; decisions are made with a recognition of the historical, cultural, and institutional dynamics and structures that have routinely advantaged privileged groups in society and resulted in chronic, cumulative disadvantage for subordinated groups
- **Transgenerational Equity** – sustainability decisions consider generational impacts and don't result in unfair burdens on future generations^{vi}

In addition, **Racial Equity** is a key lens which focuses on an end state in which race can no longer be used to predict life outcomes and outcomes for all groups are improved.^{vii} Historic and existing institutional racism have created inequitable life outcomes for people of color. This includes lower levels of educational attainment and employment, as well as higher rates of arrest and incarceration.

Our County – meaning this planning process – is striving to address Procedural Equity through the design of the stakeholder engagement process, by ensuring that all stakeholders are granted access to participate in the development of Our County. One of the main actions supporting this goal is the provision of stipends to community-based organizations representing low-income communities of color, to enable their participation early in the process by increasing their capacity to study briefing materials and actively participate in workshop discussions.

In the Equity and Resilience workshop, as well as throughout the planning process, Our County is seeking input on how to specifically address Distributional, Procedural, Structural, Transgenerational, and Racial Equity.



County and Metro Equity Initiatives

There are numerous efforts throughout the County to advance equity; a few of them are briefly described here to demonstrate how County departments and other public agencies are addressing equity in their work.

LA County Community Prevention and Population Health Taskforce Principles of Equity

The Board of Supervisors established the LA County Community Prevention and Population Health Taskforce in 2015, as an advisory body that was given the charge to “explore the racial, social, political and environmental causes of health inequities and advance effective and community-driven solutions to create a more just and inclusive LA County.”^{viii}

In February 2018, the Taskforce established a set of principles of equity to improve population health and promote healthy, equitable communities that includes:

- **Health in All Policies**, a collaborative approach to integrate and articulate health considerations in policymaking across sectors;
- **Inclusion**, which asks Department staff to work closely with community members and leaders to build authentic, collaborative partnerships and processes and institutionalize opportunities and resources for shared decision-making;
- **Accountability**, for Departments with data-driven action plans with measures of success;
- **Data Accessibility**, to democratize the collection and analysis of timely, disaggregated, and access to community-specific data;
- **Resources**, for the County to direct, prioritize, and coordinate investments to narrow health inequities by making targeted investments in communities that disproportionately experience poorer health outcomes;
- **Inclusionary Hiring**, to implement new strategies and tools to dismantle unjust and biased institutional practices, systems, and policies, and;
- **Contracting and Procurement**, to promote local purchasing, strong labor standards, and the direction of benefits to historically underserved communities.

Center for Health Equity Action Plan

The Center for Health Equity, an L.A. County Health Agency initiative led by the Department of Public Health, recently developed a six-year action plan to reduce and eliminate health inequities to ensure fair and just health outcomes in LA County. In addition to focusing on certain areas which see the biggest gaps in health outcomes, the Action Plan seeks to “embrace strategies that pivot fixing people to fixing systems that advantage some communities and disadvantage others.” The Action Plan acknowledges that health is shaped by community conditions which include good schools, safe and supportive neighborhoods, quality healthcare, a thriving and inclusive economy, strong social connections, and sustainable, healthy environments.^{ix}



The Action Plan includes five strategic priorities which are designed to improve service quality, provision and coordination, while also addressing the conditions and policies that drive and maintain health inequities. These include:

- **Reduce/eliminate gaps in health outcomes**, aligning the Center for Health Equity on the key areas of infant mortality rates, sexually transmitted infection (STI) rates and environmental toxic exposures;
- **Provide useful and inclusive data**, to create a data and reporting culture across the Health Agency that is inclusive of community experiences, captures data for the communities most often left out of planning processes, and shares data across sectors;
- **Support policy and systems change**, to embrace a Health in All Policies lens and develop strong partnerships across sectors;
- **Cultivate public, private and community partnerships**, to engage in effective cross-sector partnerships, and;
- **Strengthen organizational readiness and capacity**, to assess internal processes and evaluate their impact, as well as building staff capacity and diversity.

Metro Equity Platform Framework

The Metro Equity Platform Framework was adopted in February 2018 by the Metro Board to guide how the agency will address disparities in access to jobs, housing, education, health and safety. In so doing, Metro acknowledges that race and class predominate disparities in L.A. County, historically and currently, as well as age, gender, disability, and residency. The Framework is intended to shape specific analyses and actions moving forward and expected to evolve with experience.^x

The Framework is built around four pillars.

- **Define and Measure**, to establish a common basis to build an equity agenda, as Metro recognizes that County residents have different equity perspectives and priorities and is committed to seeking a diverse range of voices to establish meaningful equity goals, actions to achieve those goals, and metrics to evaluate outcomes;
- **Listen and Learn**, to establish comprehensive forums, by working with community-based organizations and building local government technical capacity, to meaningfully engage community members in defining, measuring, and acting on equitable outcomes;
- **Focus and Deliver**, through the Long Range Transportation Plan, to address equity issues through Metro's leadership role as transportation planner, operator, builder and funder as well as its partnership role in land use matters and the challenges of gentrification, displacement, and affordable housing, and;
- **Train and Grow**, to build a "top-to-bottom" ownership of the equity agenda throughout the agency with internal training on equity evaluation and communication.



Measure A

The Safe, Clean Neighborhood Parks and Beaches Measure of 2016, commonly known as Measure A, established a County tax on improved property at the rate of \$1.5 cents per square foot of building area. Approved by nearly three-quarters of County voters, it replaced two similar taxes that had reached or were nearing expiration and had provided the primary source of parks funding for municipal parks throughout the County. Measure A is being implemented by the Los Angeles County Regional Park and Open Space District (RPOSD) and is being guided by the Measure A Implementation Steering Committee.^{xi}

In the lead-up to the Measure A vote, County officials commissioned the Countywide Comprehensive Parks and Recreation Needs Assessment to document existing parks and recreation facilities in cities and unincorporated communities to determine the scope, scale, and location of park need in L.A. County. The assessment found that more than 50% of L.A. County's population lives in areas of high or very high park need; areas with high park need would have to add a combined total of more than 3,250 acres of new park land in order to provide the County average of 3.3 acres per 1,000 residents. Areas with very high need would need to add a combined total of more than 8,600 acres of new park land in order to provide 3.3 acres per 1,000 residents.^{xii}

"The County through its related agencies has the opportunity to use public policy to help close equity gaps instead of widening them," was one of the conclusions of the 2018 *Measures Matter* report, which created a framework for equitable implementation of Measures A and M (the latter of which provides funding for transportation infrastructure).^{xiii} One of the key findings of the report was that equitable implementation will require an extraordinary level of coordination amongst public agencies.

Los Angeles County Initiative on Women and Girls (WGI)

In December 2016, the Board of Supervisors adopted a motion establishing the Los Angeles County Initiative on Women and Girls (WGI). The WGI was charged with examining the systemic issues that lead to inequitable gender outcomes and recommend changes to improve the quality of life for women and girls throughout the County. The WGI is led by a governing council of 15 experts from across the County, as well as an executive director.^{xiv}

After extensive community outreach, the WGI established its priorities to:

- Conduct a Countywide study of the ways in which women and girls are impacted by the policies, programs, services, collaborations and other actions undertaken by the County;
- Conduct a thorough assessment of the County's recruitment, hiring, retention, promotion, testing, evaluation, and other Human Resources policies to ascertain any disparate impacts they may have on women; and
- Conduct a thorough assessment of the County's abilities and deficits in ensuring gender equity, including an analysis of each Department's programmatic impacts on women and girls in the County.



Government Alliance on Race and Equity (GARE)

The County of Los Angeles is a member of the Government Alliance on Race and Equity (GARE), a national network of local and regional governments that is working to achieve racial equity and advance opportunities for all. In so doing, the County committed to achieving racial equity by focusing on the power and influence of its institutions as well as working in partnership with others.^{xv}

Regional Planning Equity Development Tools Report

In 2015, the Board of Supervisors instructed the Department of Regional Planning to consult with experts, community groups, and other stakeholders to evaluate equitable development tools and concepts. The Department produced an Equity Development Tools Report, which highlights existing equity development tools for unincorporated areas and presents a toolbox of equity development tools that can be applied to local projects that implement the General Plan. These tools include value capture strategies; local hiring policies; community land trusts; linkage fees on commercial development for affordable housing; inclusionary housing; data-driven decision-making; using health, safety, and environmental indicators; and green zones.

The Report also recommended that the Board consider the development of an equity scorecard, the standardization and coordination of development agreements and community benefits agreements, the amendment of the density bonus ordinance, the establishment of a green zones pilot program, and the development of an equity outreach framework.^{xvi}

Green Zones Program

Initiated by the Board of Supervisors in December 2015, the Green Zones Program aims to address environmental justice issues in the unincorporated areas of Los Angeles County. The goal of the Green Zones Program is to develop targeted land use strategies to help improve public health and the quality of life of residents in vulnerable communities that have been disproportionately and historically impacted by cumulative exposure to pollution. The program framework was developed through collaboration with various stakeholder, and includes the development of an Environmental Justice Screening Map (see Figure 5), stakeholder engagement and groundtruthing, zoning code amendments, and agency coordination.



Topic Overviews

As described in the introduction, this briefing includes a more detailed discussion of public health and wellbeing, air quality, housing and land use, and economy and workforce development, as these topics are critically important to the equity and resilience discussion and have not been described in detail in the briefings distributed in previous nonprofit sector workshops.


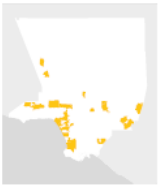
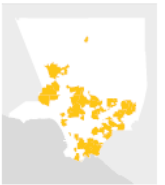
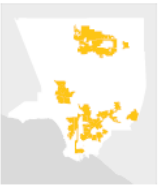

(Note that the standalone briefings for energy and climate, landscapes and ecosystems, public health and wellbeing, transportation, waste and resource management, and water also discuss equity issues as they relate to those topics; the documents may be downloaded at ourcountyla.org/resources.)

Public Health and Wellbeing

Los Angeles County is a region with vast health disparities. Many cities and neighborhoods within the County are among the healthiest in California. Other communities, however, struggle with the lowest life expectancies and highest levels of environmental burdens in the state. The 2017 report, *A Portrait of Los Angeles County 2017-2018*, investigated inequities using the American Human Development Index, a measure of well-being that considers the “building blocks of a life of freedom, choice, and opportunity – a long and health life, access to knowledge, and a decent standard of living.” The study showed a wide variation across places, racial and ethnic groups, women and men, native- and foreign-born residents, and LGBTQ people; it also sorted the County’s communities into categories which it dubbed the “Five LA counties” to compare areas with similar Human Development Index scores and highlight disparities across the County. These are shown in Figure 6 below.

One of the key measures of health in the *Portrait of Los Angeles County* is life expectancy. Residents in Los Angeles County can expect to live an average of 82.1 years, but life expectancy across the region reflects a stark differences. For instance, Asians have a life expectancy of 87.3 years whereas Native Hawaiians and other Pacific Islanders have a life expectancy of 75.4 years. The differences in life expectancy by race and ethnicity are shown in Figure 7 below. However, there are also significant differences within racial and ethnic groups. As a population group, Latinos have the second-highest life expectancy at 84.4 years, but some predominantly Latino communities experience cumulative burdens that impact longevity.^{xvii}

TABLE 1 Human Development in the "Five LA Counties"

					
	Glittering LA	Elite Enclave LA	Main Street LA	Struggling LA	Precarious LA
HD Index	9 and above	7 to 8.99	5 to 6.99	3 to 4.99	below 3
Life Expectancy (years)	86.4	83.9	82.9	81.5	78.7
Less than High School (%)*	2.3	5.4	14.9	30.8	51.8
At least Bachelor's Degree (%)*	69.9	58.3	35.5	19.6	4.7
Graduate/Professional Degree (%)*	31.5	24.0	12.6	5.4	0.7
School Enrollment (%)	91.7	84.7	82.6	77.1	73.4
Median Earnings (2015 \$)	\$52,687 and up	48,347	35,773	25,469	19,060

*Percent of adults age 25 and up.

Figure 8. Human Development in the "Five LA Counties"^{xviii}

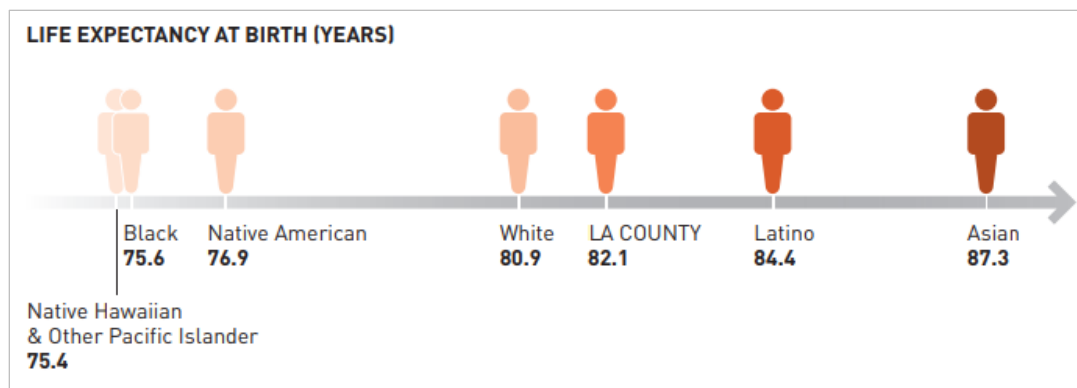


Figure 9. Life Expectancy by Race and Ethnicity^{xix}

The health and wellbeing of Los Angeles County residents is influenced by a wide variety of complex and interrelated factors. Our behaviors, including what we eat, whether we are physically active or smoke, and how often we see a doctor affects our health. Our health is also influenced by a myriad of other factors. Economic stability, environmental pollution and safety, and the surrounding built environment are all factors that shape our health, as do the individual choices we make about healthy living and wellbeing. Figure 10 illustrates types of social determinants of health.

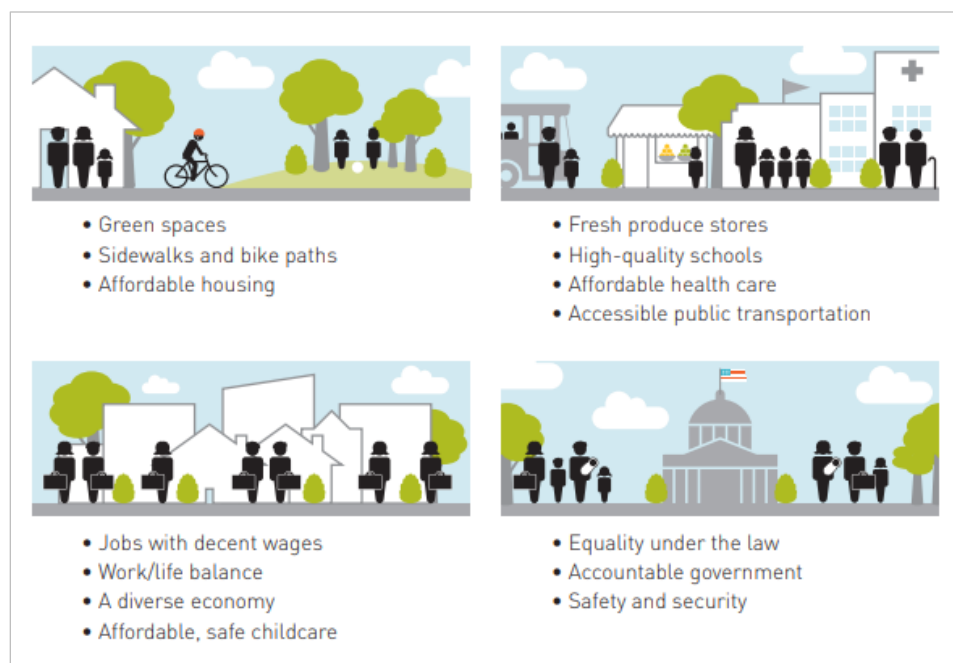


Figure 11. Social Determinants of Health^{xx}

The cumulative burden of social, economic, and environmental conditions may lead to unequal, inequitable, or disparate outcomes for a region, city, and neighborhood. Figure 12 illustrates a combined measure of healthy places in Los Angeles County, combining economic, education, transportation, neighborhood, pollution, and health care indicators. The figure shows a concentration of less healthy places in the City of Los Angeles, North and Southeast areas of the County, with areas scattered across the San Gabriel Valley and San Fernando Valley.

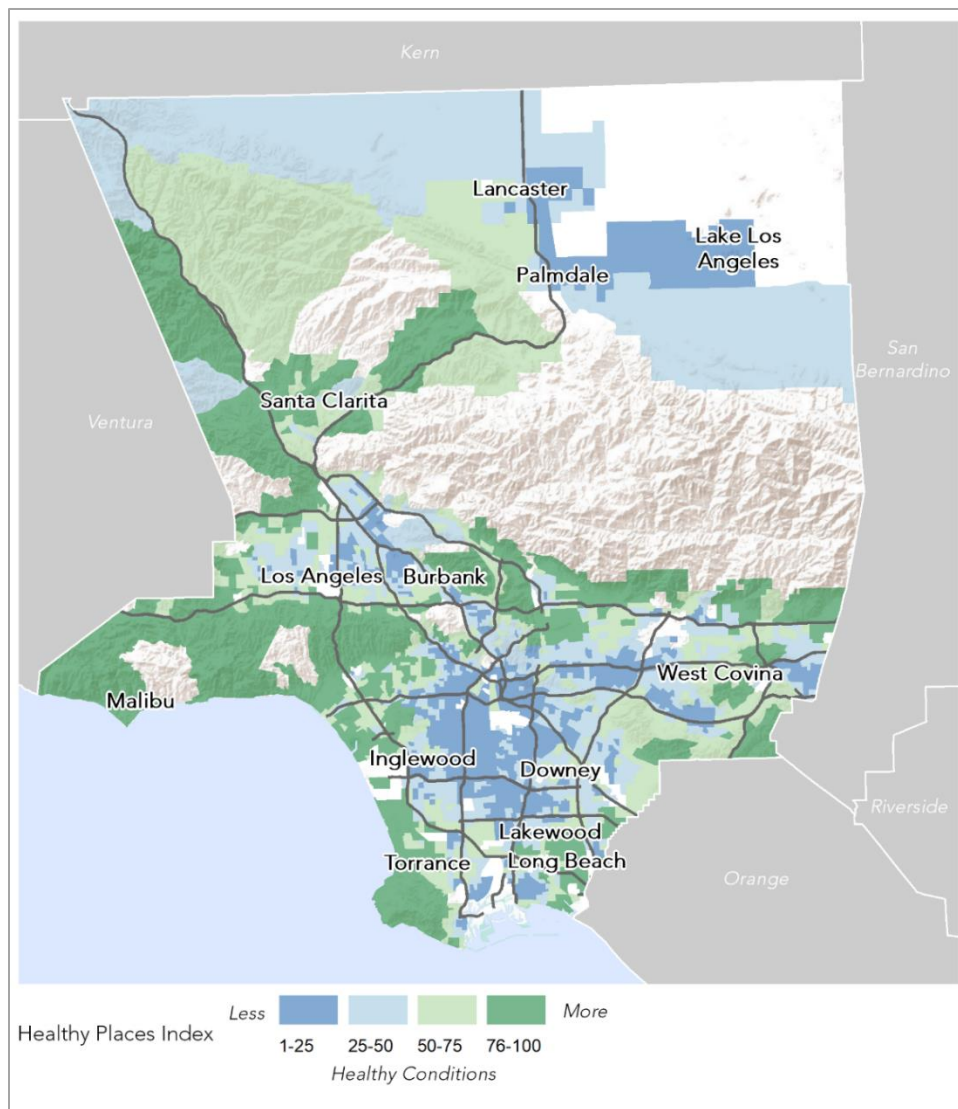


Figure 13. Healthy Places Index Map^{xxi}

Air Quality

Overall air quality has improved significantly in recent decades, but it remains a persistent challenge, particularly with regards to localized emissions that disproportionately affect communities that are historically over-burdened and under-resourced. A number of studies have shown that regional geography, wind patterns, and congested vehicular roadways affect dispersion of pollution. Within 1,000 feet of freeways in Los Angeles County, pollution from traffic is at its highest, as are rates of asthma, cancer, heart attacks, strokes, reduced lung function, pre-term births, and a growing list of other health problems.^{xxii} As discussed in the introduction, redlining and other practices led to housing and land use patterns whereby people of color were pushed into many of these freeway-adjacent neighborhoods.



There are a number of factors that have contributed to poor air quality in L.A. County, including the extensive production and use of fossil fuels and a large industrial sector, which expose County residents to even more environmental hazards. Additionally, the County's port activities and goods movement are of particular concern given their historical reliance upon diesel-powered vehicles and machinery. While there have been major improvements in reducing air pollutants from light-duty motor vehicles in recent years, heavy-duty vehicles such as trucks, trains, ships and aircraft have not seen the same kinds of improvements.

Housing

There are persistent housing equity challenges throughout L.A. County, many of which stem from the history of discriminatory practices that have led to present-day disparities in housing burdens. Housing costs, homelessness, and gentrification and displacement are continuing to impact the individuals and communities that have been the long-standing targets of discriminatory practices.

Access to stable and affordable housing is essential for human development progress, particularly for children whose health, wellbeing, and school performance can be impacted by poor housing conditions and the stress of insecure housing. For the County's lowest-income renters, the problem is especially acute: 83 percent of renters in the lowest 20 percent of the income scale were spending at least half of their income on housing-related costs.^{xxiii} Spending such a high proportion of income on housing costs leaves less money available for food, transportation, and other needs. This problem is also worsening, as Los Angeles County's shortage of affordable and available homes to lower-income individuals and families continues to increase. Although existing affordable housing and rental assistance programs help, they are not keeping up with the need for affordable homes; officially the County needs to add more than 568,000 affordable homes to meet the current demand among renter households at or below 50 percent of Area Median Income. This shortfall has grown by more than 16,000 year-over-year.^{xxiv}

Homelessness in L.A. County has grown rapidly, a result of the housing affordability problem, in conjunction with the economic and mental health burdens of population groups such as veterans, foster youth, and formerly incarcerated individuals. There were 58,000 people experiencing homelessness in 2017, which represented a year-over-year increase of more than 10,000. Homelessness exacerbates existing health issues and exposes individuals to increased risk of communicable diseases, violence, accidents, and malnutrition. Limited or no access to personal hygiene, health care, and even basic first aid makes it difficult to treat chronic conditions and even minor complaints such as cuts and colds.^{xxv}

Gentrification and displacement are also major concerns, as they threaten to destabilize long-standing communities and further impede human development progress. There are also approximately 11,400 existing affordable homes that are at "high" or "very high" risk of being converted to market rate units within the next five years, with 87 percent of these at-risk affordable homes located in transit-accessible neighborhoods.^{xxvi} Absent actions to preserve the affordability of these homes, their loss would contribute to the displacement of low-income residents, taking away access transit, neighborhood amenities, and support networks from individuals and populations that are already burdened by a history of displacement stemming from discriminatory housing practices.



Economy and Workforce Development

Economic wellbeing includes the ability of families and individuals to meet their basic needs, such as food, housing, and health care, while building long-term financial security and wealth. Income and wealth drive health outcomes by impacting individuals' access to care, safe homes, high quality food, and even levels of physical activity. Higher incomes are associated with longer life expectancies, a pattern that is evident regardless of where a person lives.^{xxvii} Educational attainment and income are also strongly correlated, which signals a challenge for those with less education, who face limited job prospects, are more likely to be unemployed, and are less likely to be able to support their households.^{xxviii}

Income disparities in L.A. County are embedded in its diverse economic landscape. The County is a hub of innovative industries, a unique confluence of aerospace and entertainment alongside manufacturing, hospitality, and arts and gaming. The unique economic environment also exhibits stark social and economic disparities, however. Based on data from the Public Policy Institute of California, 24.3% of Los Angeles residents live in poverty (2014-2016 average).^{xxix} Wide income disparities exist, ranging from median earnings of \$19,060 in poorer areas of the County to upwards of \$52,687 along the affluent Pacific Coast.^{xxx}

A Portrait of Los Angeles County 2017-2018 reports that median earnings across the County in 2015 were \$30,654. In order to better understand disparities in the County, the report divides the region into “Five LA Counties:” Glittering LA, Elite Enclave LA, Main Street LA, Struggling LA, and Precarious LA. This briefing will only highlight income disparities across two of the most disparate counties: Glittering LA and Precarious LA. In the County, higher median earnings of \$52,687 are concentrated in “Glittering LA,” including seven cities along the Pacific coast, La Canada Flintridge, San Marino, Bel-Air-Beverly Crest, and Brentwood-Pacific Palisades, while lower median earnings of \$19,060 are concentrated in “Precarious LA,” including Cudahy, Westmont, Lennox, East Rancho Dominguez, Florence-Graham, and Southeast Los Angeles. While poverty is almost non-existent in Glittering LA (<5%), the poverty rate in Precarious LA is 35.4%, which is more than double the countywide rate. Corresponding disparities in educational attainment are also visible in L.A. County. As of 2017, almost 22% of County residents aged 25 years or older had not earned a high school diploma (or equivalent) while 20.8% had graduated high school but had no other education. Another 20% of residents had a bachelor's degree, while 11% had a graduate or professional degree. Those with a graduate or professional degree earn an annual wage premium of \$55k over those with less than a high school education.^{xxxi} In 2017, 59.4% of Latino residents (48.2% of the County's population) aged 25 years or older had at least a high school diploma, compared to 87.7% of Asian residents, and 89.4% of African-American residents in 2016.^{xxxii}

As the County's economy continues to improve and wages increase, those with higher levels of educational attainment will experience a higher rate of wage growth. Although new jobs are being created, the distribution of these jobs has implications for the County's continued economic growth and prosperity. It is expected that the highest number of openings will be in occupations that require less than a high school diploma and pay less than the County's median annual wages. A breakdown of educational attainment by age group shows an encouraging trend, however—younger cohorts are staying school longer and are graduating at higher rates.^{xxxiii}

Resilience

Introduction

Resilience is inextricably linked with equity and sustainability. Residents and businesses are consistently faced with a number of natural and human-made hazards which can include, for example, the cumulative burdens of environmental pollution and lack of equal access to housing, transportation, and economic opportunity. Planning for a resilient Los Angeles County will be key to the short- and long-term quality of life of residents, and the growth, prosperity, and sustainability of the County for future generations.

Defining Resilience

Resilience has a number of definitions. The term is adapted from ecological resilience, which refers to the capacity of an ecosystem to respond to a disturbance by resisting damage and recovering quickly. This definition does not include a positive outcome but only the ability to return to the status quo. The Rockefeller Foundation and 100 Resilient Cities (100RC), define resilience as “the capacity of individuals, communities, institutions, businesses, and systems within a region to survive, adapt, and thrive no matter what kinds of chronic stresses and acute shocks they experience.” This definition includes a positive outcome for a city or county after a hazard, as opposed to returning back to the status quo.

Community-Driven Climate Resilience Planning, as defined by the National Association of Climate Resilience Planners and Movement Strategies, includes the following aspects:^{xxxiv}

- The capacity to put forward a vision of climate resilience and assert a set of community priorities that flows from that vision;
- The capacity to assess community vulnerabilities and assets and develop (or select) appropriate solutions based on a community’s unique experience, and;
- The capacity to build community voice and power to get those climate solutions resourced and implemented.

Resilient Los Angeles uses a similar definition to the one above, defining resilience as “the capacity to survive, adapt, and grow —regardless of adversity and setbacks.” The Los Angeles County Metropolitan Transportation Authority (Metro) defines resiliency as “the ability to provide core functions in the face of threats, and recover quickly from major shocks or changing conditions.”

Resilient people, systems, communities, cities and counties share similar characteristics or qualities. These may include flexibility (i.e., additional paths/strategies), robustness (i.e., ability to withstand impacts), redundancy (i.e., spare or backup capacity) integration and coordination (i.e., working together), resourcefulness (i.e., asset availability), inclusivity (i.e., for all stakeholders), or self-reflection (i.e., learning and improving).^{xxxv}

Shocks and Stresses

L.A. County encompasses a vast range of geographies, communities, climates and conditions that pose unique risks and challenges to the County's resilience. Vulnerabilities arise from distinct shocks and stresses that range from slow, chronic change to once-in-a-generation occurrences. Shocks are sudden events that threaten or impact the County's immediate well-being. These can include earthquakes, fires, landslides, public health emergencies, cybercrime, riots/civil unrest, terrorism, chemical emergencies, financial crises, extreme heat and cold events, flooding, and infrastructure (traffic disruption, power outage, etc.) or building failures.

Stresses are the longer-term, chronic challenges that weaken natural, built, and economic or human resources. These can include inequity, disparities in employment, health and education, crime and violence, homelessness, disparities in access to open space and transit, aging demographics, economic recession, lack of affordable housing, food insecurity, climate change, air pollution, urban heat island, and aging infrastructure. Stresses not only amplify the effects of shocks when they occur (particularly for vulnerable populations) but also increase the frequency of occurrence (e.g., climate change is expected to exacerbate extreme heat and cold and bring about more frequent and severe weather and flooding events).^{xxxvi}

Additional details about a sample of potential shocks and stresses are included below (additional shocks and stresses are discussed in the Equity section as well as prior briefing documents):

Earthquakes

In addition to earthquakes' immediate impacts on people, they can also cause extensive damage to buildings and infrastructure such as levees, wires, and pipes, which affects reliability and resilience. The 1994 Northridge Earthquake (magnitude 6.7), for example, caused 52 deaths, more than 9,000 injuries, and \$20 billion in property damage, making it one of the costliest natural disasters in U.S. history.^{xlvi} The County's water system is also at risk from seismic activity; according to studies by academics and the USGS, an earthquake of magnitude 7.8 or greater could sever the County's connection to imported water supplies through the State Water Project, L.A. Aqueduct, and Colorado River Aqueduct. The water and natural gas networks within L.A. County are also vulnerable to the impacts of earthquakes. Proactive infrastructure upgrades, such as the installation of earthquake-resistant ductile iron pipes, have been piloted in the City of Los Angeles.

Droughts

Most of L.A. County remains in severe drought condition. There is great variation in annual rainfall within L.A. County, with record droughts occurring over the past decade. A 2015 study showed that single-family households in California earning less than \$25,000 spent, on average, 1.8% of their income on basic water services before drought-related charges; those charges brought the rate up to 2.1% of income, more than what both the California and U.S. EPA consider to be affordable.

Housing and Homelessness

A lack of access to stable and affordable housing (and supportive services) causes strain on the health and wellbeing of individuals and communities, who face financial and emotional burdens. As discussed in the Equity Section, there were nearly 60,000 people experiencing homelessness in 2017 (a year-over-year increase of more than 10,000) and the County needs to add more than 568,000 affordable homes to meet the current demand among renter households at or below 50 percent of Area Median Income.

Climate Change

Climate change will add further uncertainty or multiply the effect of a wide variety of shocks and stresses. We can already observe increasing temperatures and variations in the amounts and timing of precipitation, snowpack, and runoff, both locally and in regions that provide resources to L.A. County. Specifically, scientists predict:

- Increases in air temperatures by 1.8-7.2°F across the region, with the greatest average increases and increases in numbers of extreme heat days (> 95 °F) occurring in Palmdale, Lancaster, and the San Gabriel Valley;^{xxxvii}
- Three to five more heat waves per year by 2050 (12 to 14 by 2100);^{xxxviii}
- A decline in annual precipitation of two inches by 2050 in low-lying, coastal areas (four to five inches in high elevation areas), which will dramatically decrease water availability statewide;^{xxxix}
- Losses in Sierra Nevada snowpack of 64% by the end of the century;^{xl}
- Sea level rise of up to 66 inches by 2100;^{xli} and;
- Increase in the likelihood of severe flooding events, limiting the availability of water from the Bay Delta as well as increasing saltwater intrusion into coastal groundwater basins in L.A. County.^{xlii}

The Southern California economy is at also at greater risk due to the increased frequency and intensity of adverse weather and storm events. Without the ability to react to and address these events, L.A. County residents could experience lack of food, water, mobility, power, and emergency services. Depending on their severity, these losses could directly and deeply impact the local economies in L.A. County for extended periods of time.

Wildfires have long threatened Los Angeles County and they are likely to worsen - scientists from UCLA, UC Irvine and UC Davis predict that by midcentury, Los Angeles County will experience bigger wildfires than it does today. The area burned by Santa Ana fires will increase by 64 percent, mainly due to drier air during Santa Ana wind events. The area burned by non-Santa Ana fires will increase by 77 percent, mainly due to an increase in temperatures. Scientists also predict that the number of structures destroyed by Santa Ana fires will increase by 20 percent, and the number of structures destroyed by non-Santa Ana fires will climb by 74 percent.^{xliii}

Wildfires can also contribute to increase in landslides due to the damage of forest canopy and vegetation from the fire followed by a high precipitation event or snowmelt. The 2017 Thomas Fire led to a landslide in Santa Barbara and Ventura Counties, northwest of L.A. County when an intense rain event shortly followed the wildfire.



Vulnerable Populations and Neighborhoods

In addition to identifying the shocks and stresses that will impact Los Angeles County, another important aspect of resiliency planning is assessing who will be most affected by them. L.A. County is home to more than 10 million residents, many of whom grapple with the stresses of poverty, financial insecurity, and lack of affordable housing on a daily basis. These populations experience inequities in access and opportunity, which consequently strain their health, prosperity, and quality of life. They are often the least equipped to handle the effects of catastrophic events such as fires and floods and end up suffering the most. As such, the term “vulnerable populations and neighborhoods” is used to denote those L.A. County residents who—by experiencing historical and systemic discrimination, exclusion, marginalization, exploitation, underrepresentation, and disinvestment—face the greatest risks from the shocks and stresses that the County experiences.^{xxxvi}

Geography also factors into a population’s vulnerability, particularly given climate change impacts, as the County’s valleys and inland areas are expected to warm more than its coastal areas, thus making them more vulnerable to extreme heat hazards and other climate-related risks.^{xliv} Some of the areas that face the greatest risk of wildfire, heat, and flooding due to climate change are also areas with high age vulnerability and/or low transportation access.^{xlv}

Vulnerable populations can also include population groups such as women; documented and undocumented immigrants; low-income residents; people with disabilities and chronic illnesses; the youth and the elderly; those experiencing homelessness or linguistic isolation; victims of domestic violence or human trafficking; and those with limited access to transportation, critical infrastructure, and municipal services. L.A. County’s resilience to shocks and stresses depends on its ability to protect and empower at-risk residents and address the needs of its most vulnerable populations and neighborhoods.^{xxxvi}

For the above-mentioned reasons, vulnerable populations have increasingly become the focal point of resilience planning and disaster response. For example, the City of Los Angeles is investing in the integration of tools and technology to prioritize its most vulnerable populations in decision-making and foster faster and more efficient disaster preparedness and recovery. One of these investments is the NotifyLA system, which the City is supporting through creative marketing, additional training, and supportive technical assistance opportunities that encourage residents to register their mobile devices. The City also intends to make Community Emergency Response Team (CERT) training more accessible through public-private partnerships, pilots, and expanded training opportunities.^{xlvi}

Finally, it is important to acknowledge that conventional disaster recovery has been shown to exacerbate existing inequities, such as the racial wealth gap.^{xlvii} In seeking to return to the “business as usual” steady state, resilience planning and disaster response can inadvertently preserve or reproduce existing inequities and social marginalizations that exist within a vulnerable population. They can even lead to the formation of new inequalities, as authorities and planners codify resilience to determine how borders between safe and unsafe, resilient and vulnerable, communities and spaces are designated and administered.^{xlviii} It is critical that resilience frameworks are transformative, iterative, and avoid locking communities into pre-defined pathways.



Topic Overviews

As described in the introduction, this briefing includes a more detailed discussion of public health and wellbeing, air quality, housing and land use, and economy and workforce development, as these topics are critically important to the equity and resilience discussion and have not been described in detail in the briefings distributed in previous nonprofit sector workshops.

(Note that the standalone briefings for energy and climate, landscapes and ecosystems, public health and wellbeing, transportation, waste and resource management, and water also discuss resilience issues as they relate to those topics; the documents may be downloaded at ourcountyla.org/resources.)

Public Health and Wellbeing

Public health and wellbeing is inseparable from resilience. Among the risk factors that affect a community's resilience are the changing climate and increasing temperatures, poor housing quality, poor indoor and outdoor air quality, and lack of access to resources including healthcare, healthy foods, transportation, and more. These risk factors are discussed elsewhere within this briefing as well as prior briefing documents.

One pathway to supporting resilience and improving public health and wellbeing is emergency preparedness. Recently, the Los Angeles County Department of Public Health (LACDPH) has worked to adjust its emergency preparedness practices from focusing on individuals towards strengthening community-based efforts. This broader approach employs an array of tools and collaborative strategies that build community preparedness, including coalitions to promote community preparedness, expansions of disaster volunteer networks, and community-level emergency planning partnerships to assess hazards, risk, and assets to prioritize emergency plan development. This effort is strengthened with the engagement of community-based organizations in neighborhoods representing the economic, geographic, and the ethnic diversity of the county, providing leadership and partnerships to promote community resilience in preparation for public health emergencies.^{xlix}

Air Quality

As discussed in the Equity section, air quality has improved significantly in recent decades, but it remains a persistent challenge particularly in communities that are disproportionately exposed to local emissions sources. The changing climate may also worsen air quality – increasing temperatures accelerate the photochemical reactions that produce ground level ozone and increase the extent of wildfires which produce particulate matter. To improve air quality, the Port of L.A. announced goals to transition all terminal equipment to zero emissions by 2030 and its drayage fleet (intermodal trucking) to zero emissions by 2035. In 2016, the City of L.A. committed to develop a plan to transition to 100% renewable energy, adopted an ordinance that will improve energy efficiency in existing buildings, pledged to bring EV sharing to disadvantaged communities, passed the Clean Up Green Up policy to protect communities at high risk from pollution, and witnessed the opening of the La Kretz Innovation Campus (home of the LA Cleantech Incubator). In addition, the City of L.A. has the most publicly available EV chargers of any U.S. city and LADWP has committed to install 10,000 EV chargers in the next 5 years.ⁱ



Economy and Workforce Development

Economic security in L.A. County is a major resiliency concern, as it impacts both short-term and long-term adaptability. For example, after emergency events, vulnerable populations without financial independence or significant savings are often struggling to keep up and pay for the needed remediation. The health of the economy and ability of local communities to recover from these events greatly depends on the resiliency of other systems such as transportation, energy, water, food, and housing.^{xxxvi} Besides improving emergency response and infrastructure resilience, strategies to improve economic security include everything from improving housing availability and affordability, growing the diversity of employment sectors, and expanding workforce training and development.

It is important to consider how resiliency and sustainability projects can address economic inequities by increasing access to living wage jobs.^{xxxvi} For instance, there are opportunities to promote economic mobility for residents and align job training programs with high-growth sectors such as bio-science and green technologies. These efforts could be made more successful through partnerships with colleges and trade-based institutions and through fostered education-to-career pipelines.^{xxxvi} Additionally, many residents of L.A. County pass through the County Jail system, often exiting without a clear path to employment. In order to reconnect this populations with job opportunities, resources and partnerships can be developed to successfully integrate previously incarcerated individuals into the workforce.

Housing

Closely related to economic security is access to healthy, safe, and affordable housing. In order to increase this access, existing affordable housing must be preserved and new affordable housing built through changing regulation, adopting new financing schemes, and implementing adaptive reuse of public sites.^{xxxvi} To address homelessness in L.A. County, it is important to create programs to support individuals experiencing homelessness by providing them with a pathway towards self-sufficiency. Pathways can include everything from providing affordable shelter, access to education and job training, and expanded access to vital resources.^{xxxvi} Housing must also be well-designed to withstand climate change, as vulnerable populations will be further strained by emergency events.^{xxxvi}



Towards an Equitable and Resilient L.A. County

Los Angeles County residents currently experience a wide variety of life outcomes which are largely determined by the demographic factors into which a person is born and realities about where a person lives. A history of discriminatory practices have led to inequities in housing, pollution burden, and economic burden, which combine with other factors to lead to disparities in the health and wellbeing throughout the County, especially for communities of color. These inequities are a threat to the current and future resilience of the County as a whole. Through strong and coordinated action eliminating inequities and bolstering resilience within L.A. County could buffer against the future impacts of climate change and other shocks and stresses.

Our County can address this dual challenge by bolstering the County's adaptive capacity and addressing the underlying factors that place individuals and communities at risk. By consistently applying an equity lens, Our County can endeavor to protect and empower residents, organizations, cities, and other actors across the region to address the needs of the most vulnerable populations and neighborhoods.^{xxxvi} This will require concerted effort to change procedures, the distribution of benefits and burdens, and structural accountability in order for future generations to experience fewer burdens and ones which are less centered on race and ethnicity.

Fortunately, communities across L.A. County already are committing to goals and strategies to advance equity and strengthen resilience. Cities such as Pasadena, Los Angeles, Long Beach and others have or are conducting vulnerability assessments to better understand local risks and which areas may be most impacted by climate change and future events. Such assessments can help city leaders to equitably plan for the future and implement resilience projects and programs to communities in preparing for the future.

Throughout the Our County planning process, stakeholders have voiced numerous goals and strategies to further equity and resilience, some of which are listed in the following section for reference. While many of them relate to sectoral topics such as water, energy, and transportation, others relate to regional governance, transparency, and accountability as they relate to procedural and structural equity. This also relates to how we measure progress and ensure equitable outcomes through Our County – and potential indicators are listed in the next section.

To reiterate, this briefing document is not a plan. Some of the potential goals, strategies, and indicators in the following pages may be combined or condensed in the plan itself, and new ones may be added. What is most important for the Equity and Resilience workshop is to make sure that Our County has the right approach and identifies what is needed to achieve the future vision of a sustainable, equitable, and resilient Los Angeles County.

What We Heard in Prior Workshops

The following bullet points reflect equity and resilience-related goals and strategies that were suggested in the nonprofit sector workshops for Water; Energy; and Transportation. They are being provided not as endorsements but rather to inform the discussions at the Equity and Resilience workshop. Participants are encouraged to consider the role of the County with regards to directly control, influence, or support public policies and programs given its current and potential jurisdictional authority.

Public Health and Wellbeing	
Prior Workshop:	Suggested Goals and Strategies
Water	<ul style="list-style-type: none"> • Strive towards the elimination of water related impacts and prioritizing benefits to historically polluted communities • Ban companies that take water rights away from communities and contaminate water bodies • Improve water efficiency and quality through regenerative nature-based infrastructure • Educate residents on the harmful effects of cleaning products on personal health and water quality • Protect and improve groundwater quality • Ensure an equitable urban forest with a climate-appropriate, healthy tree canopy, particularly in freeway-adjacent neighborhoods • Prioritize the creation of green, permeable streets and spaces that connect communities and make streets safe, walkable, and cool • Build small water capture projects like pocket parks and green alleys instead of just large regional parks
Energy	<ul style="list-style-type: none"> • Protect vulnerable individuals, particularly homeless, from heat island effects by increasing access to cooling centers and expanding tree canopy in most affected areas • Prioritize environmental remediation efforts in historically polluted communities • Expand regulations and enforcement on refineries and other polluting energy industries, particularly those in disadvantaged communities, to better address cumulative health impacts
Transportation	<ul style="list-style-type: none"> • Adopt Vision Zero initiative that seeks to reduce injuries on streets, harassment on transit and sidewalks, and pollution • Expand cool streets throughout County, including more shade structures

	<ul style="list-style-type: none"> • Increase number of shade structures at transit stops, especially in disadvantaged communities • Evaluate inequities in emergency services (ambulance, warning systems, etc.) • Improve transportation safety through community-supported methods that do not solely rely on policing • Invest in active transportation infrastructure, including protected bike lanes and sidewalk improvements that accommodate people of different abilities • Incorporate solar panels into parking lots, especially in warehouses
--	---

Air Quality	
Prior Workshop:	Suggested Goals and Strategies
Energy	<ul style="list-style-type: none"> • Prioritize zero emissions technology in frontline communities with poor air quality • Adopt/Support an indirect source rule • Shift focus from electric vehicles incentives to transit and truck emissions on disadvantaged communities
Transportation	<ul style="list-style-type: none"> • Electrify the entire transportation system, with a focus on disadvantaged communities • Target zero-emission technology upgrades in highly polluted communities • Adopt/Support an indirect source rule that includes environmental impacts from freight such as factories and warehouses, especially on disadvantaged communities • Implement air monitoring and air filtration technology along truck routes • Protect workers from health hazards, such as fumigation from freight • Ban neighborhood oil drilling with adequate buffers (i.e., 2,500 feet) to protect residential and sensitive land uses, including a rapid phase-out timeline for existing facilities • Reduce demand for gasoline, amplify demand for ZEVs, and improve transit

Economy and Workforce Development

Prior Workshop:	Suggested Goals and Strategies
Water	<ul style="list-style-type: none"> • Provide technical assistance and credits for local businesses seeking better water practices • Create a diverse and inclusive workforce in water-related careers • Ensure adequate outreach from training and workforce development facilities to reach vulnerable people and communities • Ensure water affordability through equitable utility pricing, Cal Fresh/EBT water supplements, and subsidized water-efficient appliances
Energy	<ul style="list-style-type: none"> • Adopt a Green Jobs Action Plan that establishes comprehensive standards to generate good-paying, local jobs in the shift to a renewable energy sector and green economy • Identify barriers and better designed renewable energy programs to include participation of renters, individuals with disabilities, undocumented people, and other communities traditionally left out • Invest in broad, “opportunity” workforce recruitment and training initiatives that reach underemployed populations (formerly incarcerated, veterans, residents in polluted communities, etc.) by partnering with local businesses, unions, school districts, community colleges and community-based organizations • Provide tax incentives for private industries that hire residents from opportunity training programs with living wages and benefits •
Transportation	<ul style="list-style-type: none"> • Increase access to zero emissions incentives • Incorporate “just transition” workforce development plan that places displaced workers in renewable energy jobs • Provide free/low-cost transit passes to vulnerable individuals (elderly, students, people with disabilities, etc.) • Assist small businesses and independent contractors (such as truckers) to transition into zero emissions technology • Require community benefits and project labor agreements for all transportation investments, including local hire • Implement substantive resident and local business protection measures to mitigate displacement impacts from transportation investments, including rent control, “right-to-return” ordinances, etc.

Housing

Prior Workshop:	Suggested Goals and Strategies
Energy	<ul style="list-style-type: none"> Prioritize environmental remediation, such as conversion of industrial land into green space, in environmental justice communities
Water	<ul style="list-style-type: none"> Standardize and require water testing and remediation in apartment units, commercial properties, and all school facilities Provide incentives for residential retrofits, such as improved water fixtures, in disadvantaged communities Safeguard renter populations from pass-through housing cost increases related to water infrastructure improvements (such as plumbing), and increased property values Require storm water and grey water capture and infiltration systems in new buildings Incentivize native plant and drought-resistant landscaping and eliminate barriers such as Homeowner Association "turf" requirements
Transportation	<ul style="list-style-type: none"> Increase affordability index in transit oriented development areas Use land value capture mechanisms that fund projects, such as affordable housing, for historically marginalized groups Prioritize transit route investments and connectivity in low access, low income areas Limit development of luxury housing along transit routes

Other Topics

Prior Workshop:	Suggested Goals and Strategies
Water	<ul style="list-style-type: none"> Simplify and improve governance structure for more inclusive water management and accountability Consult with and work alongside tribal governments and communities Promote stronger enforcement of water conservation measures, especially in wealthier areas that use vastly disproportionate amounts Increase water literacy through strategic, comprehensive and culturally-appropriate education initiatives Advance better flood resilience and management efforts including coordinated watershed governance and restricting development in flood-prone areas

	<ul style="list-style-type: none"> • Maximize opportunities for urban agriculture efforts through reduced water fees and eased restrictions • Invest in and coordinate with other agencies on healthy soil management
Energy	<ul style="list-style-type: none"> • Increase access to community-owned renewable energy programs, such as community solar • Attain 100% renewable energy with a priority on disadvantaged communities • Align energy investment programs with actual community needs and behaviors • Increase literacy on energy production and consumption • Ensure meaningful community engagement in energy decision-making, including public-private partnerships and Joint-Powers Authority negotiations • Improve and decentralize the County's local energy production and storage system to advance resiliency • Strengthen and support community networks and social infrastructure for better emergency preparedness for natural and unnatural disaster response
Transportation	<ul style="list-style-type: none"> • Incorporate inclusive model of governance to increase community engagement, participation, and accountability on the planning decision-making process • Conduct community needs assessments to better design and target transportation funding • Counteract privatization of public goods, especially transit • Incorporate models of resilience that recognize, support, and amplify models that communities are already using • Increase renewable energy storage for electrified transit fleet • Decentralize energy system for peak charging to not burden grid • Prepare emergency preparedness plans for all modes of transportation

Potential Indicators

The following are the major goals and some of the potential strategies in support of equity and resilience. While there are hundreds of possible strategies, we have focused on those that will benefit most from collaborative planning and implementation across the County. Please note that these goals and strategies are presented as a basis for discussion at the Equity and Resilience workshop; we anticipate that they will be edited (including potentially removing or adding items) as a result of stakeholder input.

The following indicators apply to L.A. County unless otherwise stated.

Public Health and Wellbeing	
Overall Health Conditions, Chronic Disease, Behaviors	Life expectancy at birth
	Years of life lost
	Obese adults
	Low birthweight infants
	Adults with depression
	Adults who meet guidelines for physical activity
Community Wellbeing	Adults in good or excellent health
	Average number of unhealthy days
	Poverty
	3 rd Grade Reading Level Proficiency
Health Care	Access to care
	Health professional shortage areas
	Cost of care
Environmental Health + Climate Change	CalEnviroScreen
	Environmental Justice Screening Tool
	Asthma Cases
	Heat Vulnerability Index
	Cooling Centers
	Homeless Housed in Emergency Shelters
	Heat Stress-Related Emergency Department Visits

Built Environment	Cases of West Nile Virus
	Motor Vehicle Collision Fatalities and Severe Injuries
	Food Security
	Healthy Places Index
	Households Enrolled in CalFresh
	Modified Retail Food Index (for CA)
	Perception of Neighborhood Safety

Air Quality

Ambient Air Quality	Ozone, PM2.5, and PM10 levels
	Overall air toxics risk and diesel risk
Air Pollution Emissions	Large stationary source toxic emissions
	Mass emissions of pollutants from mobile sources
	Cancer risk associated with diesel mobile sources
Emissions Reduction Efforts (Countywide)	Compliance with rules and regulations by SCAQMD permitted facilities
Emissions Reduction Efforts (County Operations)	County adoption of Near-Zero and Zero Emission Vehicles into its fleet
Air Quality, Jobs and Economy	Economic cost of air pollution

Economy and Workforce Development

General Economic Conditions	Disparities in median household or per capita income by race and ethnicity
	Disparities in unemployment rate by race and ethnicity
	Post-secondary educational attainment by race and ethnicity
	Gross Regional Product
Employment Sectors	Jobs per capita
	Percentage of new jobs and total jobs in priority sectors
	Location quotients of priority sectors

Innovation, Entrepreneurship and Small Business	LA County & Metro contact dollars to DBE, MBE, WBE, SBE, and Social Enterprises
	Kauffman Index
Employment & Income Equity	Local/targeted worker participation on LA County projects
	Gini Index
	Self-sufficiency standard
	% of total population living below federal and CA poverty lines
	Unemployment rate for youth
Funding Mechanisms	County business assistance loans
	Number of job placements from workforce development programs
	County dollars invested in County incubators

Housing	
Housing Market	Rent burdened and severely rent burdened households
	Owner cost burdened and severely cost burdened households
	Homeownership levels by race
	Occupied housing units, total housing units, and vacancy rate
	Regional Housing Needs Assessment budget and city/area progress reports
Affordable Housing Need and Production	Cumulative surplus or deficit of affordable rental homes at Deeply Low Income, Extra Low income, and Very Low Income levels
	Proximity of At-Risk Affordable Homes to Gentrification
	Urban displacement metric
Environmental Planning	Residential parcels located in flood plains, sea level rise and wildfire risk areas
Jobs	Jobs related to housing development
Homelessness	Total population of people experiencing homelessness
	Number of shelter units

Local, Regional, State, and National Laws and Policies

The following are examples of existing local, regional, and state laws and policies that promote equity. This list is not comprehensive, providing only a general overview of how local, regional and state agencies are integrating equity.

Local Equity

Air Quality – LA Sustainable City pLAn	Reduce asthma-related ER visits in the most contaminated neighborhoods to 14 per 1000 children by 2025 and 8 per 1000 children by 2035.
Air Quality – LA Clean Up Green Up Ordinance	Aims at industrial and air pollution issues, especially in low income communities. Designates three special districts in the predominantly Latino communities of Boyle Heights on the Eastside, Wilmington in the harbor area, and Pacoima and Sun Valley in the eastern San Fernando Valley, and mandates higher air filtration standards in new developments within 1,000 feet of a freeway, along with an approved special land-use restrictions including buffers, landscaping, and setbacks.
Transportation – Los Angeles Measure JJJ	Provides incentives for affordable housing in Transit-Oriented Communities, which guidelines identify as those located within ½ mile of major transit stops. Developments closer to transit stops receive increased incentives.
Landscapes and Ecosystems – Enhancing Biodiversity for the City of Los Angeles (UCLA Grand Challenge Program, 2017)	Project that developed an index used to characterize the state of urban biodiversity in the City of Los Angeles. This index provides biodiversity metrics and goals indicate to gaps and successes in natural area connectivity, and equitable access and distribution of natural areas within urban areas of the City. This index has become a priority in the City of Los Angeles’ Sustainability pLAn.
Utility Accessibility & Use – LADWP Equity Metrics Data Initiative (2016)	The initiative was established by the LADWP to track, measure, and report on how its programs are provided to all customers and residents in the City of Los Angeles. It establishes a data-driven framework that assesses how well programs, services, and resources are distributed and used throughout the city, both geographically and demographically, to see whether any disparities exist.
Utility Accessibility & Use – LADWP Low Income Program	LADWP offers qualifying customers a discount applied to their electric and/or water bills based on their income and household size.

Local Resilience

<p>City of Los Angeles – Resilient Los Angeles</p>	<p>Sets multiple goals and targets surrounding City resilience, including:</p> <ul style="list-style-type: none"> • Prepare Angelenos to be self-sufficient for at least seven to 14 days after an emergency by 2022. • Preserve existing affordable housing units and build at least 100,000 new housing units by 2021. • Increase access to green space and open space through investments along the Los Angeles River system and in underserved neighborhoods by 2028. • Invest in green infrastructure and stormwater retention to increase the number of projects that capture water for reuse, improve water quality, and reduce flooding risk by 2028. • Modernize the power grid to expand renewable energy to 65% of our power source by 2036 while deepening storage capacity and broadening emergency backup systems.
<p>City of Los Angeles – One Water LA 2040</p>	<p>By 2035, the City of Los Angeles’ aims to decrease the purchase of imported water by 50%, capture 150,000 acre-feet of water per year, and achieve an average water use of 98 gallons per capita per day.</p>
<p>Stormwater Management – LADWP Rain Barrel/Cistern/Water Tank Rebates</p>	<p>LADWP provides residential customers rebates for up to two 50-gallon rain barrels or one cistern.</p>

Regional Equity

Air Quality – L.A. County Board of Supervisors	The Los Angeles County Board of Supervisors has prioritized prevention of environmental health impacts throughout the County, with initiatives such as the Oil and Gas Strike Team and the Toxic Threat Strike Team. The first addresses the conditions, regulatory compliance, and potential public health and safety risks associated with existing oil and gas facilities in the unincorporated Los Angeles County. The second monitors and coordinates inspections around environmental toxic sites around the county.
L.A. County Policy of Equity	County employees are prohibited from inappropriate conduct toward others, even if the conduct does not meet the legal definition of discrimination or unlawful harassment. Employees are also protected from discrimination, sexual harassment, other unlawful harassment, retaliation and inappropriate conduct toward others based on a protected status. The County Equity Oversight Panel is an independent oversight body that reviews County equity investigations and makes recommendations to County Department Heads regarding disposition and discipline.
Waste – LASAN Franchise System Goal	Institutes maximum rate caps throughout all of LA City that promotes equity so that all of the City’s business, institutional, and multifamily customers receive the same services for a predictable rate.

Regional Resilience

Los Angeles County Community Disaster Resilience	Project that seeks to promote individual and community resilience to public health emergencies like natural disasters and pandemics. This program is centered on eight “levers of community resilience,” including wellness, access, education, engagement, self-sufficiency, partnership, quality, and efficiency.
---	---

State Equity

Public Health – SB 1000 (Leyva, 2016)	Requires planning agencies to add an environmental justice element (or add related goals, policies, and objectives into other elements). If a city or county has a disadvantaged population, it must identify objectives and policies to promote civil engagement in the public decision-making process and address health-related policies including air quality, food access, physical activity, and safe and sanitary homes.
--	---

Air Quality – AB 617 (Garcia, 2017)	<p>AB 617 provides funds to address the disproportionate impacts of air pollution in environmental justice communities. The measure requires local air districts, like SCAQMD to take specific actions to reduce air pollution and toxic air contaminants from commercial and industrial sources. In 2017, SCAQMD received \$10.7 million for community-level emissions reductions plans along with monitoring and testing. The bill also includes new requirements for enhanced fence-line and community monitoring in the vicinity of major stationary sources such as refineries.</p>
Transportation – SB 535 (de Leon, 2012)	<p>Under the bill, polluters pay into a Greenhouse Gas Reduction fund that distributes millions of dollars to projects in cleaner freight, affordable housing near transit, and public transit.</p>
Transportation – SB 540 (Roth, 2017)	<p>SB 540 rewards developers who agree to construct buildings where 30% of units will be sold or rented to moderate-income households, 15% to lower income households, and 5% to very low-income households, representing a legal tool for fostering more dense development in transit corridors.</p>
Energy – Solar on Multifamily Affordable Housing Program (CPUC)	<p>The California Public Utilities Commission approved this program that constructs over 300 megawatts of solar energy to 2,000 affordable housing properties over 10 years. Households powered by solar receive a utility bill credit in proportion to the amount of renewable energy they generate.</p>

State Resilience

Coastal Regional Sediment Management Plans	Coastal counties must create a regional plan for sediment management that contributes to a larger master plan. This includes developing an assessment of each region's physical conditions, biota and habitats, and a governance structure to implement Plan recommendations. Los Angeles County is still assembling an effective governance structure for its coastal area.
Safeguarding California Plan: 2018 Update	Provides statewide goals for climate resilience planning, including: support and coordinate adaptation efforts across local, regional, and tribal jurisdictions and policy areas to maximize community resilience.
Cal-ADAPT (2011, updated 2018)	A repository of climate change-related tools, data, and research that aims to provide local decision-makers with access to the wealth of data and information that is produced by California's scientific and research community. The website's development was a recommendation of the 2009 California Climate Adaptation Strategy and was updated in 2018 as part of California's Fourth Climate Change Assessment .
SB 901 (Dodd, 2018)	Using this bill, California utilities may issue cost-recovery bonds for damage caused by wildfires sparked by power lines, to be paid for by customers. This helps to financially fortify investor-owned utilities against increasing impacts of climate change.
Energy Savings Assistance Program	ESAP funds weatherization and upgrades in affordable, multifamily housing to ensure long term affordability for low-income renters.
Water – SB 88 (2015)	Requires water right holders who divert more than 10 acre-feet of water a year to report water use and diversion for emergency storage annually. When water supply is insufficient, the State Water Board may require diverters to submit monthly reports of water use.
Sea Level Rise Policy Guidance (California Coastal Commission, 2015)	This Guidance lists the best available science on sea level rise, as well as a variety of proposed recommendations for remaining resilient to its effects. The Draft 2018 update to this Guidance updates the best available science standards and data available on sea level rise.
Residential Adaptation Policy Guidance – Sea Level Rise (California Coastal Commission, 2018)	Provides examples of sea level rise adaptation strategies that cities and counties can consider when drafting local policies related to residential development. The Guidance also provides general background on challenges that sea level rise can present to residential areas generally.

National Resilience

FEMA Preparedness Grants	FEMA provides grants to state, local, tribal, and other governments that prepare them to recover from many types of man-made and natural disasters. FEMA issues an average of \$2.5 billion a year to support planning, equipment purchase, training, conducting exercises, personnel costs, operational costs, etc.
National Flood Insurance Program – Community Rating System (FEMA)	The NFIP aims to reduce economic impact of natural disasters by providing affordable flood insurance to property owners, renters, and businesses within communities that participate in this program. The Community Rating System is a voluntary program that communities can use to maintain and improve local floodplain management programs beyond the NFIP's minimum requirements. This System can decrease flood insurance premiums when communities can demonstrate actions that have reduced flood risk.
EPA Heat and Human Health Mapping (2018)	EPA provides methodologies for developing maps and mapping tools that allow for assessments of the health impacts of extreme heat on vulnerable populations. The methods are intended for use by local stakeholders and decision-makers, to empower them to make decisions that target resources to vulnerable populations and develop adaptation responses that promote resiliency.

Endnotes

ⁱ Miller, Greg. “Newly Released Maps Show How Housing Discrimination Happened,” in National Geographic. Published 17 October 2016. Retrieved from: <https://news.nationalgeographic.com/2016/10/housing-discrimination-redlining-maps/>

ⁱⁱ Retrieved from <https://news.nationalgeographic.com/2016/10/housing-discrimination-redlining-maps/#/01-redlining-maps-los-angeles.jpg>

ⁱⁱⁱ <https://oehha.ca.gov/calenviroscreen>

^{iv} Robert D. Bullard, *Race and Environmental Justice in the United States*, 18 Yale J. Int’l L. (1993).

^v Lewis, K. and S. Burd-Sharps. 2018. *A Portrait of Los Angeles County*. Measure of America of the Social Science Research Council. Retrieved from: <https://ssrc-static.s3.amazonaws.com/moa/PoLA%20Full%20Report.pdf>

^{vi} Park, Angela. *Equity in Sustainability: An Equity Scan of Local Government Sustainability Programs*. September 2014. Retrieved from: https://www.usdn.org/uploads/cms/documents/usdn_equity_scan_sept_2014_final.pdf?source=http%3a%2f%2fusdn.org%2fuploads%2fcm%2fdocuments%2fusdn_equity_scan_sept_2014_final.pdf

^{vii} GARE Racial Equity Toolkit. Retrieved from: <https://www.racialequityalliance.org/wp-content/uploads/2015/10/GARE-Racial-Equity-Toolkit.pdf>

^{viii} Principles of Equity. 16 February 2018.

^{ix} Center for Health Equity Action Plan 2018-2023. Retrieved from: <http://publichealth.lacounty.gov/CenterForHealthEquity/ActionPlan.html>

^x Metro Equity Platform Framework Presentation to the Executive Management Committee. 15 February 2018. Retrieved from: https://media.metro.net/about_us/committees/images/report_tac_epf_2018-03.pdf

^{xi} <http://rposd.lacounty.gov/2016-ballot-measure/>

^{xii} L.A. County Department of Parks & Recreation, 2016.

^{xiii} Carter, Vanessa, Manuel Pastor and Madeline Wander. *Measures Matter: Ensuring Equitable Implementation of Los Angeles County Measures M&A*. January 2018. Retrieved from: <https://dornsife.usc.edu/pere/measures-matter-la/>

^{xiv} WGI About Us webpage. Retrieved from: <https://www.lacounty.gov/wgi-about-us/>

^{xv} Government Alliance on Race & Equity About page. Retrieved from: <https://www.racialequityalliance.org/about/>

^{xvi} Los Angeles County Department of Regional Planning. *Report on the Board Motion Regarding Equity Development Tools and the General Plan Update (March 24, 2015, Item 4). 24 June 2015*. Retrieved from: http://file.lacounty.gov/SDSInter/bos/bc/230225_official_20150624_equity-development-tools-gp.pdf

^{xvii} Lewis, K. and S. Burd-Sharps. 2018.

^{xviii} *ibid*

^{xix} *ibid*

^{xx} Modified from Measure of America’s *A Portrait of Los Angeles County* (2018).

^{xxi} Modified from Southern California Public Health Alliance, *Healthy Places Index* (2018).

^{xxii} <http://www.latimes.com/local/california/la-me-freeway-pollution-what-you-can-do-20171230-htmllstory.html>

^{xxiii} Lewis, K. and S. Burd-Sharps. 2018.

^{xxiv} California Housing Partnership Corporation. “Los Angeles County Annual Affordable Housing Outcomes Report.” 30 April 2018.

^{xxv} Lewis, K. and S. Burd-Sharps. 2018.

^{xxvi} *ibid.*

^{xxvii} Chetty, R. and et. al. 2016. “The Association Between Income and Life Expectancy in the United States, 2001-2014.” *JAMA*, 315(16): 1750-1766.

^{xxviii} <https://laedc.org/research-analysis/search-reports/download-info/economic-update-los-angeles-county/>

^{xxix} Public Policy Institute of California. 2018. *California Poverty by County*. Retrieved from: <http://www.ppic.org/map/california-poverty-by-county-and-legislative-district/>

^{xxx} Lewis, K. and S. Burd-Sharps. 2018.

^{xxxi} <https://laedc.org/research-analysis/search-reports/download-info/economic-update-los-angeles-county/>

^{xxxii} <https://laedc.org/research-analysis/search-reports/download-info/economic-profile-latino-community-la-county/>;
<https://laedc.org/research-analysis/search-reports/download-info/asian-american-community-los-angeles-county/>;
<https://laedc.org/research-analysis/search-reports/download-info/african-american-community-los-angeles-county/>

^{xxxiii} <https://laedc.org/research-analysis/search-reports/download-info/economic-update-los-angeles-county/>

^{xxxiv} https://movementstrategy.org/b/wp-content/uploads/2017/10/10.24.17_WEB_CD-CRP1.pdf

^{xxxv} Materials presented by 100RC

^{xxxvi} <https://www.lamayor.org/sites/g/files/wph446/f/page/file/Resilient%20Los%20Angeles.pdf>

^{xxxvii} Burillo et al., “Climate Change in Los Angeles County: Grid Vulnerability to Extreme Heat.”

^{xxxviii} California Department of Public Health (2017), Climate Change and Health Profile Report Los Angeles County. Centers for Disease Control and Prevention (CDC) Cooperative Agreement 5UE1EH001052

^{xxxix} *ibid*

^{xl} *ibid*

^{xli} *ibid*

^{xlii} *ibid*

^{xliii} Jin, Yufang, et al. “Identification of Two Distinct Fire Regimes in Southern California: Implications for Economic Impact and Future Change.” *Environmental Research Letters*, vol. 10, no. 9, 2015, p. 094005., doi:10.1088/1748-9326/10/9/094005.

^{xliv} <https://www.ioes.ucla.edu/project/climate-change-in-the-los-angeles-region/>

^{xlv} <http://www.accessmagazine.org/wp-content/uploads/2014/11/Richer-Poster-Revised.pdf>

^{xlvi} <https://www.lamayor.org/sites/g/files/wph446/f/page/file/Resilient%20Los%20Angeles.pdf>

^{xlvii} https://www.eurekalert.org/pub_releases/2018-08/ru-ndw082018.php

^{xlviii} <https://chargedaffairs.org/the-problem-with-resiliency/>

^{xlix} <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2013.301268>

¹ LA County: Sustainable LA Environmental Report Card (ERC) 2017 and City of L.A.: Sustainable City pLAn (3rd Annual Report)